REMOVAL OF AN EIGHT OUNCE VESICAL CALCULUS BY THE SUPRAPUBIC ROUTE.

By J. HENRY C. SIMES, M.D.,

OF PHILADELPHIA.

PROFESSOR OF GENITO-URINARY SURGERY IN THE PHILADELPHIA POLYCLINIC; SURGEON TO THE EPISCOPAL HOSPITAL.

WHILE large calculi have been found in the bladder at post-mortem examinations, and also have been removed during life, yet their frequency is not so great as to render the report of a case superfluous. Although the termination of the following case was unfortunate, the patient dying four hours after the operation, yet it is an illustration of what may be done under such circumstances as were found, and shows the possibility of the removal of extremely large calculi by the suprapubic operation.

The history of the case is, unfortunately, not as perfect as it should be; it was, however, ascertained that the patient had been a sufferer for at least four or five years with bladder trouble, and some three years ago was told by a surgeon that he had a stone in the bladder. At this time he refused to have any operation, and his sufferings continued. On May 31, I was asked to see the case by his physician, Dr. Wm. H. Bennett, who had discovered the presence of a stone in his bladder a few days previously. Mr. Z., æt. 38 years, told me he had been for several years affected with bladder trouble, and during the past few months had rapidly broken down in his general health; this was, indeed, quite evident. I made an examination and found the stone without any difficulty. An operation was advised, but from his extremely debilitated condition, a favorable result was scarcely to be anticipated.

The operation of lateral lithotomy was decided upon for several reasons. The general bad condition of the patient, the condition of the bladder, the size of the stone, which was thought to be large, but not of such an extreme size as it was found to be, all influenced me in favor of the cutting method.

On June 2, the patient was etherized, and I made a lateral cut. Immediately upon the introduction of my finger into the bladder I was satisfied that there would be difficulty in the removal of the calculus through the perineal cut. The forceps were introduced, and an attempt to seize the stone made; this having failed after several trials, I then introduced a lithotrite, with the intention of making an attempt to crush, but was not successful in getting the stone to engage in the blades of the instrument. Further exploration with the finger convinced me that it was impossible to complete the operation by the perineal method. The size of the stone and the close attachment of its surface to the wall of the cavity rendered any further attempt useless. The patient having taken the ether fairly well, and his condition being such as to justify immediate further operation, I proceeded at once to do the supra-pubic operation. An incision was made through the abdominal walls, above the pubis, about two and a half inches long; then a staff was passed into the bladder, along the urethra; a tenaculum was thrust through the walls of the bladder, striking the staff; the bladder was now opened, cutting on the staff; introducing my finger through the incision, I immediately came in contact with the stone, which was found to be closely adherent to the cavity wall; I now with the finger carefully separated the stone from the walls of the cavity, being assisted in doing this by having the stone lifted up and steadied by the fingers of one of the assistants passed into the rectum. The calculus being free in the cavity, a pair of large stone forceps were introduced, the stone seized and extracted. The bladder cavity and wounds, both perineal and abdominal, were thoroughly washed out with warm boracic acid solution, a drainage tube was placed in the perineal and abdominal wounds, both passing into the cavity of the bladder; two stitches were passed through the abdominal walls, which closed the wound around the drainage tube. The patient was returned to bed, and came out of the ether with a fair pulse, which continued for an hour or two, when there was a change for the worse, and it was quite evident that the shock was too great for his exhausted condition to overcome, and he gradually lost ground, dying about four hours after the operation.

The stone was weighed soon after its removal, and found to be eight ounces; its greatest circumference is nine inches, and its transverse circumference is seven inches.

There are several points in connection with this case which are of special interest, and I shall briefly refer to them.

First, was the operation of attempting to remove the stone justifiable? This, I think, can only be answered in the affirmative, since it was positively certain that no other method of treatment offered any hope of relief, and without relief a fatal termination must very soon result.

On the other hand, did any operation offer any hope of relief? This, also, may be answered in the affirmative. There are on record quite a number of cases where stones of the size of this one, and even larger, have been removed by operation, and the patients have recovered. Was the procedure adopted in this case suitable, or would it have been better to have employed some other? In answering this, it may be said that the operation of lithrotrity could not have been performed. The size of the calculus, while not absolutely preventing lithrotrity, was certainly an unfavorable element. That which was positively against the crushing operation was the attachment of the stone to the wall of the cavity. It would have been impossible to have engaged it in the blades of the lithotrite without having done serious injury to the parts. As to the performance of lithotomy in this case—was it an unnecessary operation? My reasons for adopting this method, I have given above, and now, knowing the whole circumstances connected with the case, before and after the operation, I cannot see any reason why I would not again proceed in the same manner. When the condition of the bladder is considered, indeed it may be said that the entire normal mucous membrane, which should line the organ, was morbidly changed, and not in a state to properly perform its function, the necessity for complete and thorough drainage was imperative, and as an evidence that the drainage was best obtained by means of the perineal wound, it was found that the urine and oozing of blood all flowed out of the drainage tube which was in the perineal wound, the tube in the abdominal wound remaining perfectly dry.

A word in reference to the relation of the stone with the bladder. The stone did not lie in the bladder cavity proper, but was encysted at the lower and posterior part of the organ;

the region which would correspond to the fundus in the normal bladder. The cavity of the cyst in which the stone lay was in communication, at the time of the operation, with the cavity of the bladder. This was evident from the fact that when an instrument was passed into the bladder cavity, through the urethra, it immediately came in contact with the stone. The demonstration of the presence of a cavity, in addition to the normal bladder cavity, was quite evident after the stone was removed, by examination through the abdominal wound. The true bladder cavity, I am inclined to think, was very much changed from the normal condition. Again, the stone did not lie loose in the cavity of the cyst, but was closely attached by at least three-fourths of its surface, the remaining fourth being free and presenting toward the cavity of the bladder. The attachment of the stone to the cyst wall was very firm and required considerable force to separate it. By careful manipulation with the finger the separation was accomplished, and was very much facilitated by having the stone lifted up by the fingers in the rectum.

In conclusion, it may be remarked that the cavity of the peritoneum was not opened by the supra-pubic section. The method adopted was to cut through the abdominal walls until the layer of fat covering the bladder was reached; the finger was then used to separate this layer until the bladder came into view. A large sized staff now passed into the bladder, through the urethra, was distinctly felt by the finger in the abdominal wound. A tenaculum was passed through the walls of the bladder, and an incision was made on the staff which opened the cavity of the organ. The bladder walls were seized on each side of the incision by a pair of forceps, and the cut enlarged to a size sufficient to permit the removal of the stone.